

The Rise and Fall of the Windsor Locks Canal and the Factories Along the Canal

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1) Introduction

The rise and fall of the Windsor Locks canal and the factories along the canal is a fascinating story. This article covers:

- the history of the canal and the factories along it,
- the factors which caused their initiation,
- the factors which caused their rise and their fall,
- the resulting effects on the town of Windsor Locks.

While the official name of the canal is the Enfield Falls Canal, the people of Windsor Locks have always referred to it as the Windsor Locks Canal.

The history of the canal and the factories can be summarized as follows:

In the early 1700s, there were no factories or mills in the area now known as Windsor Locks. In the middle of the 1700s, mills began to appear along Kettle Brook, near the river, which was part of the Pine Meadow section of Windsor, Conn. In 1829, the canal was built through Windsor Locks to provide for the transportation of goods and people, and to provide water power for factories. It worked. Factories and mills and factories grew up along the canal. In 1845, a railroad was built along the canal which changed how the canal was used. The Railroad took over the role of transporting goods and people. The factories and mills continue to thrive, because of water power from the canal. However, in the 1900s, and especially after 1950, the number of factories declined. By 1990, there was only one factory left, and the canal was no longer functional.

There is a larger context in which to view the history of the canal and its factories. There were two sides to Main Street. On the river side, there was the canal and the factories along it. On the other side of Main Street was a long strip of retail stores. Together, these two sides constituted the financial and social engine of the town for about a century, from the mid-1800s to the mid-1900s. While it might be difficult for the young people of Windsor Locks to visualize it now (2016), life in Windsor Locks centered on Main Street during that century. Then, Windsor Locks was hit by a double-whammy. By 1980, all but two of the factories were empty, and the entire strip of retail stores along Main Street disappeared in what was meant to be a “re-development” of Main Street. Unfortunately, the expected return of retail stores to replace the demolished ones never occurred. As a result, Main Street went, in a short period of time, from being the vibrant center of the town which provided jobs on one side of the street and shopping on the other, to a long quiet street with neither. The following two photos show the difference. This is mentioned here only to provide context for the topic at hand, which is the canal and the factories along it.



Main Street in the 1960s



Main Street in the 1980s

The twists and turns that nature and fate took with regard to the canal and the factories could never have been predicted. As we shall see, some of them are counter-intuitive. Now, let's take a look at the history of the canal and the factories.

2) The Earliest Mills near the River

The mills along the canal were built after the canal was built. However there were mills very close to that area in 1741. There was a water-powered mill in that area in 1784. The canal wasn't built until 1829, and the first mill to make use of the canal was not built until 1931. These mills were in the Pine Meadow section of the town of Windsor. The best description of life in that area at that time was by Jabez Haskell Hayden (1886). Here is his description of those first mills. The information in the rest of this section is also taken from that article.

According to Jabez H. Hayden (1886):

Water-power was first used to run a saw-mill on Kettle Brook, which was being built, or rebuilt, by the Denslow family in 1742; at that date half of it was sold to Daniel Hayden, and afterward the other half was sold to his brother Isaac Hayden. About twenty years later, Daniel Hayden had failed, and in 1769 it passed into the hands of Haskell & Dexter, whose families operated it jointly three quarters of a century, when the Dexter family became sole owners, and they still (1886) continue it in operation. As early as 1781 a small grist-mill was set up on Pine Meadow Brook, a mile and a half from the present village, by Ensign Eliakim Gaylord and Elijah Higley. It passed into the hands of Jacob Russell, who continued it about thirty years. The mill was afterward used for wool-carding, and later had several other transformations. The site is now (1886) occupied by William English's paper-mill.

In 1784 Haskell & Dexter built a grist-mill below their saw-mill, and it was kept in operation until the building of the canal destroyed the water-power. They also built in 1819 the grist-mill which is still (in 1886) conducted by the Dexter family. In 1811 Herlehigh and Harris Haskell (who were born and spent their lives here) built a gin-distillery on the site of the present silk mill. The enterprise was hailed as a great boon to all the neighboring towns, because it made a market for their rye and corn. The business was successfully prosecuted until 1833,

In 1770, Mr. Seth Dexter built a mill for "cloth-dressing" of wool on the site of Mr. C. W. Holbrook's mill on Kettle Brook. He brought the technology to do this from Massachusetts. This mill, which was called "Dexter's Clothier Works" was in operation for about 60 years (1770-1830). Mr. Dexter trained a number of men to set up and run such mills.

Haskell and Dexter built a grist mill in 1784 (as discussed above). In 1819, they built a second grist mill near the old saw mill. That second grist mill is shown in a 1910 photo below. We shall see later in this article that it was in the basement of this building that Charles Dexter developed a method of manufacturing paper. The dirt road in front of the mill is Main Street. The grist mill was torn down in 1925, and paper became the source of the Dexter family fortune. This mill was across from the Congregational church, which can be seen in the above photo of the Fishing Derby.



Haskell & Dexter grist mill, built in 1819. 1910 photo.

3) Factors Leading to the Building of the Canal

Now that we have seen that mills, including water-powered mills, existed near the river from around 1770 to when the canal was built in 1829, let's look at some things that were happening to cause the canal to be built.

We start with Mr. William Pynchon, who was one of New England's first settlers, and probably the best businessmen among the early settlers. He was looking for a strategic place to found a settlement along the Connecticut River. He wanted a place with good soil for farming and also a place which was strategically located for the transportation of commercial goods. He discovered such a location that hadn't yet been settled yet. It was the area we now know as Springfield. The land he found was just north of the Connecticut River's first large falls - Enfield Falls. This was as far north as seagoing ships could go. By founding Springfield where he did, Connecticut River traffic would either begin, end or have to cross his settlement. Mr. Pynchon was a very savvy, forward thinking businessman. (William Pynchon, Wikipedia)

In 1636, Mr. Pynchon sent supplies from Boston, up the Connecticut River. However, his vessels could go no farther than the foot of the Enfield Falls. He then provided land transportation for the 14 mile trip to Springfield. He built a warehouse on the East side of the river at the highest practicable point his vessels could reach, to store his goods while awaiting transit. He called the landing-place **Warehouse Point**. (Jabez Hayden, 1886)

In the 1820s, flat-bottomed boats on the Connecticut River could be taken over the falls by using local "fallsmen" who moved the boat forward by using long poles. One man was required for each ton of cargo. Not only did the added labor costs make this method of overtaking the falls expensive, but the cargo could not weigh more than ten tons. Any additional freight had to be offloaded at Warehouse Point and warehoused for later transport or carried around the falls by ox teams. (Enfield Falls Canal)

Mr. Pynchon started shipping goods as far as Springfield, even though it was very difficult and costly. Businessmen wanted something to be done to make shipping past Enfield Falls much cheaper and easier.

In 1824, the Connecticut River Company was chartered with improving the navigability of the river by removing sandbars and building canals. It focussed on building the Enfield Falls Canal. It was found that the West side of the river was the best for making a canal. The people behind this were mostly businessmen from Hartford who wanted to increase their trade with towns that were "up-river", that is, toward Massachusetts. Though the improvement of navigation was the primary object, the backers of the work considered waterpower to be important. (Jabez Hayden, 1886)

Construction of the canal began in 1827, and it was opened on November 11, 1829. The canal was 5 1/4 miles (8.4 km) long and had a vertical drop of 32 ft (9.8 m). The locks admitted craft up to 90 feet (27 m) long and 20 feet (6.1 m) wide. The businessmen who had the canal built, fully intended to profit from

- 1) the tolls charged on canal traffic,
 - 2) the sale of mill sites,
 - 3) the leasing of water rights to mill operators along the last mile of the canal bank.
- (Enfield Falls Canal)

The canal was finished in 1829. Around the locks of the canal, in Pine Meadow, a new settlement formed, and in 1854, it was incorporated as Windsor Locks. The new canal brought commerce and good fortune to Windsor Locks. Boat traffic, both for goods and for passengers increased immediately. The number of factories along the canal bank increased. When there is the potential for monetary gain, businessmen will come and invest. The canal provided the reason.

4) Factories built near the Canal from 1829 to 1844 Before the Railroad went through Windsor Locks

Jabez Haskel Hayden's 1886 article provides an excellent list of the factories build from the time the canal was completed until the railroad was built through Windsor Locks in 1844. The start and end dates for these factories are provided.

1831 - 1834 - **Jonathan Danforth's mill** built door butts (hinges),

1835 - 1837 - **Samuel Williams paper-mill.**

1836 **Carleton and Niles saw-mill**, which became a **paper mill**

About 1836 **Charles Haskell Dexter** began making wrapping-paper in a basement room of the grist-mill, his water-power being supplied by Kettle Brook.

1838 - **Haskel & Hayden silk mill**

1839 - 1957 - **Royal Prouty's wire drawing mill.**

1839 - 1842 - James H. and John F. **Wells paper mill**,

1844 - H. A. **Converse iron foundry**, went to his son, A. W. Converse, upon his death.

1844 - **Slate & Brown** built cotton machinery. During the Civil war their mill was used as an armory by Denslow & Chase, and many hands were employed making guns. That completes the list of factories listed by Jabez Haskell Hayden that were built between the time the canal was built in 1829 and the railroad was built through Windsor Locks in 1844.

5) The Railroad comes to Windsor Locks in 1844

As a small town between Springfield and Hartford, Windsor Locks has always needed transportation both for goods and for people. Before 1829, travel was by foot, by horse, or by horse and buggy. The streets were not paved. As we saw, a canal was built in 1829 to circumvent the Enfield Falls in the Connecticut River, and it was

immediately successful in transporting people and goods between Hartford and Springfield. Factories were built along the canal to take advantage of both the ability to transport goods, and to use the water power made possible via the canal. In 1844, a railroad was built through Windsor Locks. It immediately replaced the canal for the transportation and both goods and people. However, the canal continued to sustain the economic growth of the town by providing water power for factories built along the canal. Rail traffic steadily increased, and in 1875 the present station was built to provide better service for travelers on the Hartford-Springfield line. Up until World War II, the station served a steady flow of passengers. The railroad station ceased operation about 1971. Below is a photo of the Railroad Station that was built on Main Street in 1875. Above information from "Great American (Railroad) Stations: Windsor Locks, CT (WNL)"



6) The Complete List of Companies Along The Canal

Mark S. Raber and Patrick M. Malone (1991) wrote a detailed report which contains the most complete listing that could be found, of the businesses that owned and operated the mills and factories along the canal from 1929 to 1991. The following map, which is from the Raber and Malone report, shows the location of each of the 16 factory sites. It helps you visualize the information in the chronological list of companies at each site. Following the list, we will attempt to characterize the list by developing some summary statistics.

The Raber and Malone report had a large fold-out page which provided information on the 70 companies that operated the mills and factories on the 16 sites. They left out one factory, the Windsor Locks Paper Corp. For purposes of completeness, the list below contains all 17 sites. One has been added for the Windsor Locks Paper Corp. For each of the 17 sites, there is a list of the names of the companies that occupied that site in chronological order. For each company name, the dates they started and ended operation are given, along with the type of product they manufactured. Mergers of different companies are noted, as are moves of a company from one site to another. The letter "c" in front of a date means "circa" = "about". In some cases, information was added to this list which was not in the Raber and Malone report. In every case in which information was added, the name and date of the source is provided.

Factories along the canal, listed chronologically by site number.

See map for location of the site numbers.

This information taken from the Raber and Malone (1991) report.

- Site #1.
 - A. P. Wilks & Co., sawmill, 1836 - 1840.
 - J. B. Chapman, sawmill, 1840 - 1847.
 - C. B. Huchins & Co., sawmill, 1847 - 1850.
 - James Outerson, paper mill, c1850 - 1855.
 - Converse, Burbank & Co. paper mill, c1856 - 1857.
 - Persse & Brooks, 1857, became part of Site #2.

- Site #2.
 - Persse & Brooks, Pacific paper mill, 1857 - 1862
 - Semour Paper Co. c1862 - 1898
 - American Writing Paper Co, 1898 - 1930. Operated under its Windsor Paper Co. Division. Later the building was demolished. According to The Springfield Union of July 13, 1899, The American Writing Paper Co bought the Windsor Paper Co.
 - American Writing Paper Co. will sell off its Windsor Locks unit on Jan. 11, 1937 Dec 27, 1936 issue of the Boston Herald)

- Site #3.
 - Glover & Son machine repairs, c1870 - 1880.
 - Windsor Locks Machine Co. manufactured paper making machines, c1881- 1920.
 - Windsor Paper Co. (owned by American Writing Paper Co.), c1920, but made part of Site 2.

- Site #4
 - H. A. Converse & Co., moved from Site 6b. 1867.
 - A. W. Converse & Co., c1882 - 1890

This is a detailed topographic map of Windsor Locks, Connecticut, and surrounding areas. The map shows the Connecticut River flowing through the center, with the Windsor Locks area to the west and Warehouse Point to the east. Key features include the Birge Hill, Windsor Locks, and Warehouse Point. The map includes a grid system with letters A through Z and numbers 1 through 16. Various landmarks are labeled, such as the North Street School, St. Mary's School, High School, Library, Town Hall, Soldiers Memorial Hall, Grove Cemetery, Polish Nat. Home, Substation, and Warehouse Point. The map also shows the Connecticut River, Windsor Locks, and Warehouse Point. The map is oriented with North at the top.

- Plant taken over by Eli Horton & Son, c1890 as part of Site #5.

Site #5 - Eli Horton, worked for Persse & Brooks, made chucks at Site #7, c1851 - 1864.
 - Incorporated in 1873.
 - Horton's son-in-law, Ezra Bailey, took over c1878 after he died.
 - Purchased Gabb Manufacturing Co, which made aviation products, 1949.
 - Sold to Greenfield Tap and Die in 1956 by Conn. International.
 - Conn. International ran Crouse Hinds here until 1981.

Site #6 - Jonathan Danforth, built door-butts, c1835 - 1844 under various owners.
 Site divided c1844 - 1864.

Site #6a - Slate & Brown, 1844 - 1850
 - Denslow & Beach, machine shop, c1851 - 1855
 - F. M. Brown, cotton machinery, c1851 - 1855
 - A. G. West, sewing machine maker, c1855 - 1860
 - Denslow & Chase, machine shop c1860 - 1864
 - probable site of William Muir Army rifle contract 1863-1864
 - Dwight, Skinner & Co. sold site to Montgomery Co in 1881, and purchased Seymour Paper Co plant at Site #7. Montgomery made novelty yarns, and used site until 1989. They expanded in 1891-1893, and again in 1904.
 (see Site #16 for more info about Montgomery)

Site #6b - J. P. and H. A. Converse foundry, 1844 - 1860
 - H. A. Converse foundry in 1851 - 1855 timeframe
 - H. A. Converse built new plant at Site 4 in 1864.

Sites #6a and #6b were combined in 1864 under various wool scouring firms, H.R.Coffin & Co, being the earliest.

Site #7 - Samuel Williams & Whiting Hollister paper mill. (Many operator combinations) 1833 - 1844
 - Persse & Brooks Anchor mill. 1844 - 1856. Anchor Mill burned in 1856, rebuilt in 1857 as part of Persse & Brooks Paper Works Co. c1857 - 1862
 - Semour Paper Co., lower mill. c1862 - 1882.

- Dwight, Skinner & Co., wool scourers, bought plant in 1882, moved from Site #6.
- Anchor Paper Mill Co. bought plant in 1894, made copying, silver, & anti-tarnishing tissue, impression copying books to c1920.
- Montgomery Co. bought and demolished site c1920, and built concrete factory; consolidated all operations at Site #6 and #16.
- Principal site of Montgomery Co. tinsel manufacturing for electric, telephone and radio cords; military braid; drawing and electroplating of tinsel wire after 1925: wire mesh products after c1938, metallic yarns after c1950. It ran until 1989.

- Site #8
- James and John Wells Paper mill, c1839 - 1843. Operated by C. P. Hollister 1843-1847. Mill burned in 1847. Ruins bought by A. & G. Blake for cotton batting plant. Plant sold to L. B. Chapman in 1850. It was run as a stockinet factory by varied tenants of L. B. Chapman 1851-1863.
 - A. C. Medlicott & others began later. Medlicott Co, c1863 - 1950. Made cut stockinet goods c1863 - 1867. Made full fashion knit underwear afterwards. Site rebuilt and enlarged c1863 - 1888.
 - Plant expanded in 1881, 1885, 1888. All operations consolidated here c1888. Operations ended in 1950

- Site #9
- C. H. Dexter manila paper plant began east of canal about 1840, Probably with Kettle Brook water.
 - C. H. Dexter and E. A. Douglass enlarged paper mill in 1847. Firm later became the Dexter Corp, with earlier Dexter grist and saw mill.
 - Toilet paper products introduced in 1861-1862, and was made until 1936.
 - Plant burned in 1873. Expanded in 1881.
 - New products from 1886-1895 include: tissues, Bristols, pattern paper, manifold linen. Plant expanded in 1898.
 - Made heavy cover papers from c1901 - 1920.
 - Discontinued heavy cover papers in 1923.
 - After 1920, specialized in lightweight papers for condensers, typewriting, medical preparations, favors.
 - Plant expanded in 1924, 1927, 1930, 1954, 1959 and 1967.
 - Concentration on long-fiber paper products after c1935, including teabag paper, hospital products, and other filters.
 - Dexter sold out to Ahlstrom in 2000.

- Site #10 - Royal Prouty wire drawing mill, c1839 - 1857.
 - Site area used as part of Site no 11 by Medlicott Co. c1863 - 1888 (see Site #8)
- Site #11 - Leander Hodgekiss edge tools and machine shop. 1847-1849.
 - Converted to Carroll & Risley paper mill c1849 1857 under several operators.
 - Site area used as Medlicott Co. subsidiary plant c1865 - 1878. See Site #8.
 - Windsor Locks Electric Light Co. took over part of the site in 1893.
 - Northern Conn. Light & Power bought Windsor Locks Electric Light c1907-1908. Generated power and distributed gas from Hartford.
 - Plant sold to C.H. Dexter Corp in 1942.
- Site #12 - George P. Clark built plant for industrial trucks, casters, etc on part of Site #11. 1893. The firm was incorporated as George P. Clark Co and added a power plant in 1906. They continued development of materials handling products.
 - Springfield Union July 15, 1958 said that George P. Clark Co sold its land to C. H. Dexter.
- Site #13 - H. Haskell and Jabez Hayden gin mill, 1811 - 1933 PRE-DATED CANAL. Converted to silk thread mill in 1938. Mill burned and rebuilt in 1948. Ceased operations in 1913.
 Dwight Allen took over the silk mill from 1881 - c1895.
 - Gudbrod Brothers. Co. sewing silk plant, c1895 - 1900.
 - Windsor Silk Co., c1900-1913. Sold to George P. Clark Co. (Site #12).
 - Plant demolished c1919.
- Site #14 - Josiah Rice plant made Wesson & Leavett rifles, c1845.
 Undocumented others made cotton batting and twine c1845 - 49.
 Converted to thread and twine plane by Wilmarth Thread Co.
 Operated from c1849 - 1865.
 - Used as Medlicott Co subsidiary plant c1865 - 1878. (See Site #8.
 - F. W. Whittlesey owned tissue paper plant c1878 until his death in 1908.
 - new mgmt. group including Whittlesey's widow until August 1914 (Springfield Republican issue of August 11, 1914)

- Springfield Republican of Nov. 23, 1921, said that the **Windsor Locks Paper Mills** was taking over the old Whittlesley paper mill that they had been operating.
- According to the Springfield Republican issue of March 19, 1922, the **Windsor Locks Paper Mills**, which are the former Whittlesley paper Mill, are putting in concrete for new machines.
- According to the Springfield Republican issue of January 4, 1925, the **Windsor Locks Paper Mills**, which was the Whittlesley Paper Mill has been owned by J. N. Smythe of Philadelphia for the past five years. That means that he owned it from about 1921 to about 1925.
- According to the Springfield Republican issue of March 26, 1930, the property of the **Windsor Locks Paper Mills company** has been sold at auction. The auction announcement was in the Boston Herald issue of March 23, 1930

Site #15 - Philip & E. J. Ripley iron rolling mill. c1845 - 1850.
 - Ripley & Talcott c1850 - 1856.
 - Iron works leased to E. C. Woack c1856 - 1857.
 - Enlarged as steel works by Farist & Windsor/Anchor Locks Steel Co., made crucible steel for dies and tools and some steel products with purchased billets, c1860-1895.

Site #16 - Connecticut River Co. rental factory c1846, leased to Connecticut River Mills for printing cloth and umbrella goods. c1847 - 1856.
 - Austin Dunham & Co. bought mill c1856. Used by various textile operations c1856 - 1871.
 - J. R. & George Montgomery leased Dunham mill, 1871, and made specialty cotton yarns and warps beginning in 1867, metal and tinsel yarns in 1886. Montgomery Co. expanded yarn ops. at Site #6 in 1881.
 - Developed tinsel products for telephones, electric products, military braid, decorative fabrics and ribbons; Plant closed with 1920 expansion of Site #6.

Site #17 - Windsor Locks Paper Corp. c1946 - c1955
 To provide some information about the Windsor Locks Paper Corp., set of newspaper articles was found that span the years 1949 to 1959. The "Story of Windsor Locks" shows this company as being formed in 1946. It was owned by Leo Cohen of New York, but operated by Miss Ida Giacopassi of Windsor Locks.

Mr. Leo Montemerlo was foreman of the “converting room”. It employed 40 men, and operated 24 hours a day, seven days a week.

The Springfield Union issue of October 30, 1949 had an ad by the **Windsor Locks Paper Corp.** for an experienced machine operator.

According to the Springfield Union issue of July 21, 1953, a fire was put out at the **Windsor Locks Paper Corp.**

According to the Springfield Union of February 25, 1953, the **Windsor Locks Paper Corp.**, which suspended operations in December of 1952, will reopen on March 2.

According to the Springfield union issue of February 3, 1954, the **Windsor Locks Paper Corp.** paid \$40,750 in taxes.

According to the Springfield Union of August 3, 1955, and according to the Springfield Republican of August 20, 1955, the **Windsor Locks Paper Corp.** is cleaning up after a massive flood.

According to the Springfield Union of April 29, 1958, a car drove into the canal in front of the **Windsor Locks Paper Corp.**, about 1000 feet north of the canal's locks. He was rescued by workers at the plant.

According to the Springfield Union of January 19, 1958, the **Windsor Locks Paper Co.** has shut down for an undefined period.

According to the Springfield Union of February 3, 1959, a fire occurred in a generator at the **Windsor Locks Paper Corp.** It was quickly found and extinguished before much damage was done.

7) How the Number of Factories Changed Over Time

The above list of companies at each of the 17 factory sites was quite long and filled with details. It would be useful to know how many companies were operating in any given year. To determine this, we need to identify for each site, the date that a business first opened up, and the date that the last business closed. That information was gotten from the above list. It is presented below.

Site #1 - 1836 — — 1857 (became part of Site #2).

Site #2 - 1857 — — 1930 American Writing Paper ended in 1930.

Site #3 - 1870 — — — — 1920 when it became part of Site #2.

Site #4 - 1867 1890 when it became part of Site #5 (Horton).

Site #5 - 1851 — — 1981 (had been Horton, but ended as Crouse-Hinds.

Site #6 - 1835 — 1844 when it divided into 6a and 6b.

Site #6a - 1844 — became part of Montgomery in 1881. Stopped in 1989

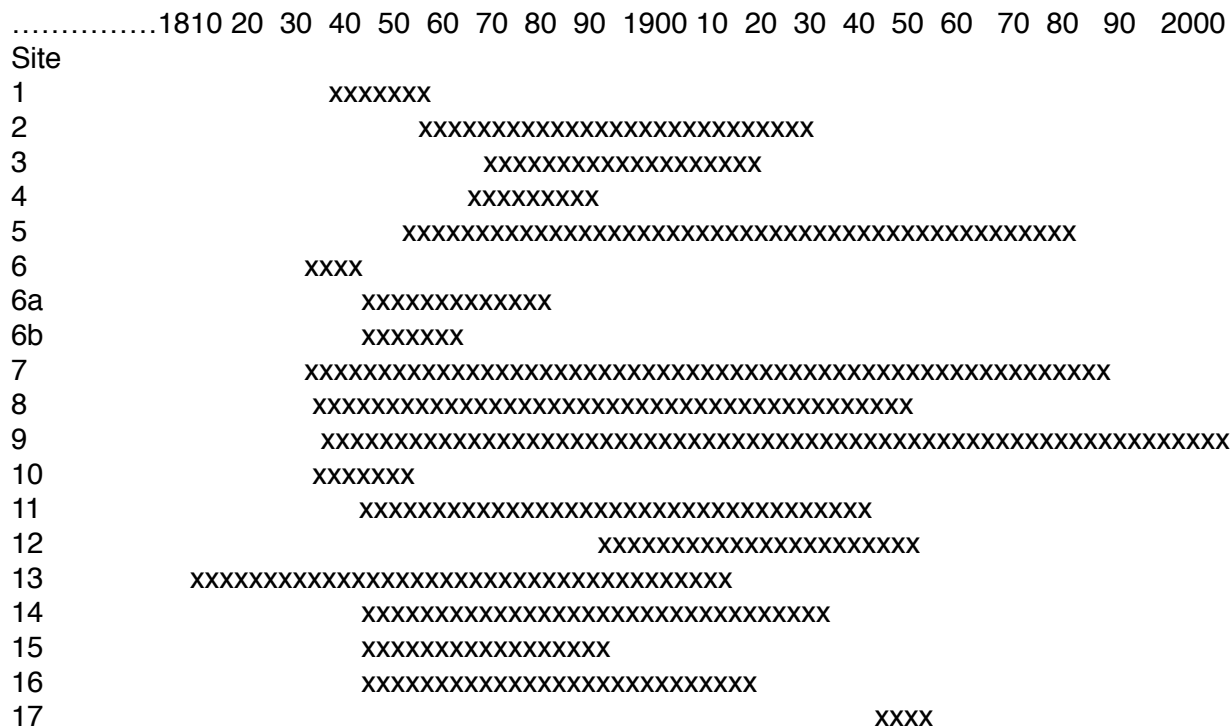
Site #6b - 1844 — ended as H.A. Converse in 1864 when it became part of Dexter.

Site #7 - 1833 — bought by Montgomery in 1920, ended operation in 1989.

Site #8 - 1839 — bought by Medlicott in 1863. Ended operation in 1950.

Site #9 - 1840 - Dexter sold out to Ahlstrom in 2000.
 Site #10 - 1839 - 1857 sold to Medlicott, ended ops in 1950.
 Site #11 - 1847 - Northern Conn Light and Power sold to Dexters in 1942.
 Site #12 - 1893 - George P Clark Sold to Dexters in 1958.
 Site #13 - 1811 - 1913 sold to George P. Clark, plant demolished in 1919.
 Site #14 - 1845 - 1930 Windsor Locks Paper Mills closed.
 Site #15 - 1845 - 1895 Farist & Windsor/Anchor Locks Steel Co.
 Site #16 - 1846 - 1871 leased by Montgomery, plant closed in 1920.
 Site #17 - 1947 - 1955 Windsor Locks Paper Corp.

Some companies owned businesses at multiple sites. In the above list, each company (eg Dexter) is only shown at a single site, so we can identify the number of businesses operating at any one time. Now that we have the start and end dates for each of the 17 sites, we can make a table to represent that data. The table is below:



By counting the number of occupied sites at 25 year increments, we get:

YEAR	Number of Sites Occupied
1850	12
1875	13
1900	11
1925	8
1950	6
1975	3
2000	1

Now we know the number of companies in operation every 25 years from 1850 to 2000. From that and from the other chart we made, we can see that:

- 1) the first company to operate a factory after the canal was built, started in 1833.
- 2) one factory still remained in existence in 2000, and is still in existence as of this writing in 2016.
- 3) there were never more than 13 factories operating at one time.
- 4) the number of companies operating at the same time remained at about 12 from 1859 to 1900, and then it slowly declined to 1.

Given the above chart, we are in a position to study the factors involved in the rise of the factories and in their demise. We shall do that in section 9 of this article. Before we do that, there is one thing left to do. The only things we know about the companies so far are their names, their dates of operation, the products they made, and the site or sites they operated in. While it is beyond the scope of this article to delve deeply into the history of each of the 70 companies, it would be useful to take a bit of a closer look at the companies operating these factories at a single time. We will do this for the year, 1909. The reason that year was picked is that the information is available for that year.

8) Photos & Descriptions of the 12 Factories Operating in 1909

In 1909, the Windsor Locks Journal published a booklet which had photos and descriptions of the 12 companies operating factories along the canal at that time. Edward Lanati used the photos and descriptions from that booklet in his 1976 article. He attributed them to the Windsor Locks Journal booklet, but did not say who the author was or what the title of the booklet was. Those photos and write-ups are used here. The writing style is dated, but fun to read. Much of the spelling and word usage are archaic. However reading the old 1909 writing style adds to the experience of learning about those old companies. That writeup could not be improved upon. It begins here and goes on to the end of section 8.



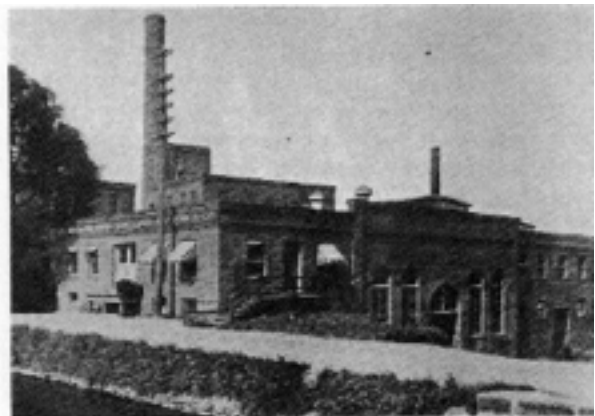
J. R. Montgomery Company (cotton warps, mercerized yarn novelty yarn)

The J. R. Montgomery Company - The firm of J. R. Montgomery was established in 1871 for the purpose of manufacturing Cotton Warps used in Satinets (*cotton fabric with feel of satin*) and Union Cassimeres (*thin, lightweight woolen fabric*). The firm was then composed of J. R. Montgomery as the active partner, with two others who constituted the partnership. A few years after, the outside interests were bought by J. R. Montgomery, who continued under the old name, until 1885. George Montgomery was taken into the business as an active partner, and the line of manufactures was enlarged, taking up the making of Novelty Yarns, which was new and unique line of Manufacture. The firm stands as the pioneer in this branch of textile industry in this country and this part of the business which is conducted in a separate factory, has grown steadily and rapidly, until its plant is of large proportions and so evenly adjusted in all its parts as to furnish exceptional facilities. In 1891, the firm of J. R. Montgomery was merged into a corporation under the name of The J. R. Montgomery Co, of which the novelty yarn mill was built. The capital of \$350,000 was invested in enlarging the scope of the business.

In 1896, this Company was first in the field in placing upon the market in this country an entirely new product. Mercerized Cotton Yarn. It has within a few years become widely known and extensively used. The Company is possessed of facilities for producing large quantities of Cotton Warp, in both plain and fancy colors, as well as Double and Twist yarns in carded combed Egyptian, Sea Island and Peeler stocks in all colors and printed effects. They manufacture at their Novelty Yarns mill all Yarns to produce novel effects in fabrics or trimmings, used all known fibers, as well as gold, silver, and copper tinsel, chemical compounds, glass, etc.



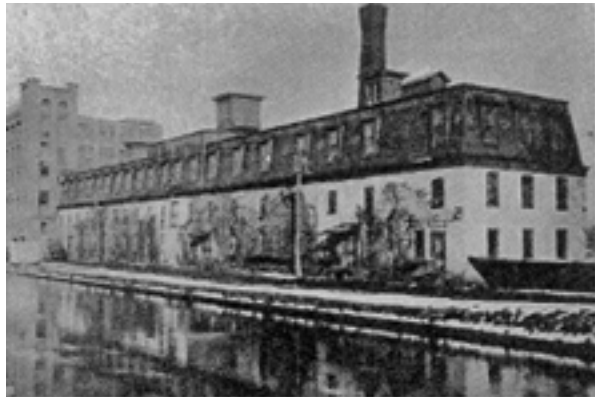
The Medicott Company



**Northern Connecticut Light
and Power Company**

The Medicott Company - The manufacturing of Worsted and Woolen Underwear for men, women and Children is the business of this Company, and its goods are favorably known to the textile trade. The main mill was built and business started in 1863-64 by W. G. Medicott and the present Company was formed in 1868. About 1880, the late C. D. Chaffee purchased controlling interest in the Company, and in following years added largely to both the buildings and the equipment.

Northern Connecticut Light and Power Company - This Company supplies Electricity and Gas for light, heat and power. The Company purchased and consolidated the local electric lighting companies of Windsor Locks and Enfield and built the fine new plant shown above at Windsor Locks in 1907-8. It is equipped with modern machinery for producing electricity. Gas is brought in from Hartford.



The Anchor Mills Paper Company



**Windsor Locks Machine Co
Paper Mill & Steam Laundry Machinery**

The Anchor Mills Paper Company - The mill occupied by this Company is one of the oldest in use on the bank and was built in 1833. It was built for a paper mill and conducted by Persse & Brooks, who had as one of their contracts the making of the paper for the New York Herald, which they continued up to the time of the Civil War. The building was later used as a wool scouring mill by Dwight Skinner and Company. It again became a paper mill in 1894 when alterations and additions were made and new and modern machinery was installed, and the present joint stock company was formed. The company manufactures Railroad, Yellow, Buff and White Copy and Tissues, Impressions Copying Books, Silver and Anti-Tarnish Tissues, and many Specialties.

Windsor Locks machine Co. - This company was started in 1881 by E. E. Latham, Edwin Upton and George Glover. Mr. Latham was killed by an accident and the business was continued for many years by Messrs. Upton and Glover. They sold out their interest in 1901 to Orson T. Cone, A. F. Saxton and C. William Sadler. Messrs. Cone and Saxton retired and the business is now under the management of Mr Sadler. It is a stock corporation. The building was partially destroyed by fire in 1903, but was rebuilt, and an addition was made in 1907 to accommodate increasing business.



C. H. Dexter & Sons
Grist & Saw Mill established 1769



Paper Mill

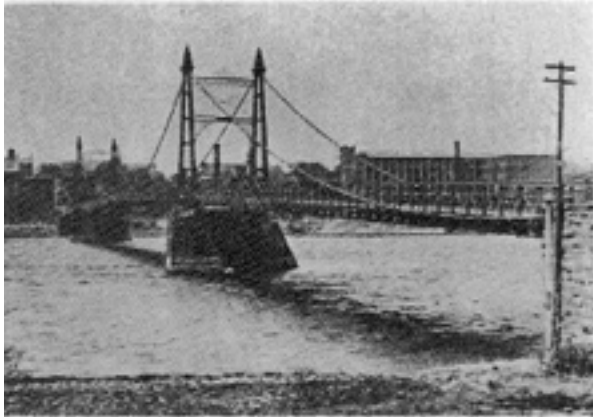
C. H. Dexter & Sons Grist & Saw Mill - The oldest industry in town, and operated today by the fifth generation. Here in "ye olden time" was ground the Flour and Meal for the farmers of the surrounding country. Later the mill did wholesale grinding for the Springfield, Hartford and New Haven Markets, which had been superseded in the march of events. Now an extensive Flour, Grain and Feed business is carried on.

It was in the basement of this old mill that C.H. Dexter began the manufacture of paper in 1835.

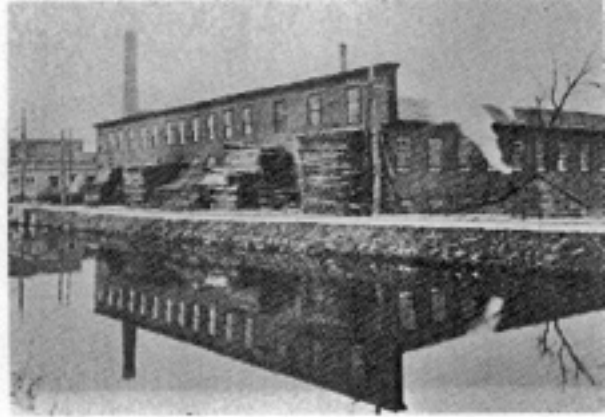
C.H.Dexter & Sons Paper Mill - The original wooden mill on this site, built by Charles H. Dexter, was destroyed by fire in 1875.

Rebuilt in modern construction in 1876 under direction of Herbert R. Coffin, who was admitted to partnership in 1865 and succeeded in management and ownership of the company until his death in 1901. The growing business demanded larger facilities and the mill has since been enlarged three times: in 1881, 1898, and 1908, besides the purchase of Mill No. 2 at Suffield in 1902.

Here are made the famous Princess and Unique Cover Papers, also the Star Manifold Linen and Onion Skin Papers and other Star Brand Specialties, Tissues, Bristols, Toilet, etc., which go the world over. "The sun never sets on the Star Mill products."



**Suspension Bridge
Windsor Locks - Warehouse Pt.**



**George P. Clark Company
Trucks, Casters, Ventilating and
Exhaust Fans, Drying Machinery**

George P. Clark Company - The product of this Company consists of Hand, Platform and Special Trucks, Patent Rubber and Iron Wheel Casters, Drying, Ventilating and Exhaust Fans, Special Drying Machinery for Paper manufacturers, etc. The Trucks are made in a large variety of styles suitable for every purpose and for moving all kinds of material. The business was originated by George P. Clark, who in 1870 invented and patented a Rubber Roll for wool scouring, which he placed on the market. He secured other patents, one of which, a method of attaching tires to iron truck wheels, became a valuable feature of the business. The main part of the present mill was built in 1893, and a large addition made a few years later. In 1901 an incorporated company was formed, and in 1902 an electric power plant was installed, new and modern machinery put in, and individual electric motors attached to the various machines.



Windsor & Farist Steel Mill



Windsor Silk Company

Windsor & Farist Steel Mill - Formerly conducted by Windsor and Farist. A flourishing business was done for many years in this mill, which produced some of the finest cutlery steel in the country.

Windsor Silk Company - The Silk business was begun in Windsor Locks by Haskell & Hayden, who in 1938 built the mill shown at the left of the Whittelsey Paper mill. It was one of the pioneers in this industry in Connecticut, and the manufacture of silk has been continued to the present time in the same building which is one of the oldest mills on the canal bank.



The Windsor Paper Company
Div. of American Writing Paper Co.



The E. Horton & Son Co.
Lathe Chucks

The Windsor Paper Company - The original owners of this mill were Persse and Brooks, who were succeeded by the Seymour Paper Company. This Company conducted a large business for many years and acquired a wide reputation for high grade Book and Cover Papers. Early in the year 1899 the mill was acquired by a company known as the Windsor Paper Company, and a few months later in the same year was purchased by the American Writing Paper Company, which had its main offices in Holyoke, Mass. The new owners at once began the work of remodeling, and extensive alterations and repairs were made and new modern machinery installed at a cost of several hundred thousand dollars. The remodeled plant resumed operations on April, 1901. The buildings of the plant extend 650 feet along the canal bank, and are 225 feet deep at the widest point. It is equipped throughout with modern machinery for the economical production of Paper. It has three paper machines, with a daily capacity of 80,000 pounds. Its product is High-Grade Rope Papers, Specialties, Boards for Box makers, etc.

The E. Horton & Son Co. - The industry was started in a small way by Eli Horton, who was the inventor of the Chuck which bears his name. The business was conducted until 1873 under the name of E. Horton & Son, at which time a stock company was formed and the present corporation succeeded to the business. Property adjoining on the North was purchased from A. W. Converse & Co., and an iron foundry was added to the regular business of making Chucks. In 1903, an addition was built which more than double the capacity of the plant. The Company's works are equipped throughout with the best tools and machinery that can be procured, and they have perfected many ingenious special machines for the economical production of their goods. The Horton

Universal Chuck was placed on the market in 1855 and it has been acknowledged standard ad all Universal Chucks operated by means of rack and screw are copies of Mr. Horton's original invention. The Company makes Chucks in sizes suitable for holding the smallest drill to the largest car wheel, in an endless variety of styles. Their Goos go into all parts of the civilized world, and their exhibitions of Chucks in all great expositions have been awarded the first prize.



The Medlicott Company Mill

This ends the section that was taken from Edward Lanati's 1976 article, which he took from the booklet published by the Windsor Locks Journal.

9) Some Factories Converted to Tobacco Business in the 1900s

The "History of Windsor Locks" book provides interesting information on what some companies did to make use of factories along the canal in the 1900s, when their traditional manufacturing businesses were in decline. Two of these companies were the Bloch Brothers Tobacco Co., the Fuller-Russell Tobacco Co. and the Winstead Co.

In 1923, Howard Russell, working for the Connecticut Valley Tobacco Growers Association, leased three floors of the Montgomery Company's concrete mill, to store cases of tobacco. The Growers Association dissolved in 1927, and Mr. Russell teamed with the Bloch Brothers Tobacco Company to lease that same space. They used it to make chewing tobacco. That

operation ceased in 1933, and they went into the business of packing cigar leaf tobacco, and they also continued to store tobacco on those floors.

In 1937, Mr. Russell worked for the W. H. Winstead Company who was using space in the Horton Building for their tobacco business, but they needed more space, so they leased three floors of the Montgomery company's number 1 mill. At that time, Montgomery was cutting back on producing cotton goods.

In 1939, the Bloch Brothers installed modern curing rooms for the tobacco on the second floor of Montgomery's Building number 5, which was called their Dye House. Shortly thereafter, they bought the entire building from the Montgomery Company.

In 1941, the Winstead Company decided to get out of the cigar business and to stick with the cigarette business. A new company was formed, called the Fuller-Russell Tobacco Company. The Fuller-Russell Tobacco Company and the Bloch Brothers Tobacco Company were still operating when the "History of Windsor Locks" book was written in 1954.

The Section of this article was added to provide more insight to what was happening to the mills and factories along the canal in the early to mid 1900s, when the manufacturing companies were faltering. We saw in Section 7 above, that the number of companies in the mills was going down during that time period. Now we see that some enterprising tobacco companies took advantage of that to use those mills, which were designed for other purposes, to store and process tobacco. The Fuller-Russell company closed in 1971. The fact that tobacco companies worked in the factories in the 1920-70 timeframe is not well known.

10) Conclusions and Lessons Learned

The goal of this article was to learn:

- the history of the canal and the factories along it,
- the factors which caused their initiation,
- the factors which caused their rise and their fall, and
- the resulting effects on the town of Windsor Locks.

(Background) Mills and factories, including those which were water-powered, existed in Pine Meadow, in the 1700s, long before the canal was built in 1829.

The history of the canal can be summarized as follows:

- A group of businessmen from Hartford planned for and funded the canal, to allow the passage of boats between Hartford and Springfield. Without a canal, boats could not go up-river past the Enfield Falls. There were special boats which could go over the falls, but they were difficult and expensive to operate.
- The canal was built to make money from both the transportation of people and goods, and the selling of water power to the future mills.
- The building of the canal did result in its use for the transportation of people and goods, and the result was immediate.
- The canal resulted in the town of Windsor Locks being incorporated in 1854.

- The boom in transporting people and goods by boat only lasted about 15 years (1829-1844).
- The train line connected Hartford and Springfield in 1844. When this happened, the railroad immediately took over the transport of both people and goods between Hartford and Springfield
- After 1844, the canal company had to rely on selling water power to make its money.

The factories along the canal were located on seventeen sites between the canal and the river. A chronological list of companies that occupied each of the seventeen lots during the period from 1830 to 2000 was shown. For each company, the list gave its primary products, the dates it started and ended operations, and the site it was on.

The next step was to develop a chart of how many companies were in operation in those factories in any given year between 1830 and 2000. The results were:

- The first mill along the canal started in 1833.
- There were never more than 13 mills operating along the canal at any one time.
- The number of mills operating along the canal was flat at about 12 from 1850 to 1900.
- The number of operating mills went steadily down, from 11 in 1900, to 8 in 1925 to 6 in 1950 to 3 in 1975 to one in 1990.

Of the more than 70 companies operating along the canal from 1733 to 1990, we saw:

- Many of them didn't last very long.
- Many changed management often.
- There were a number of mergers.
- A few companies (Dexter, Horton, Montgomery) did last a long time.

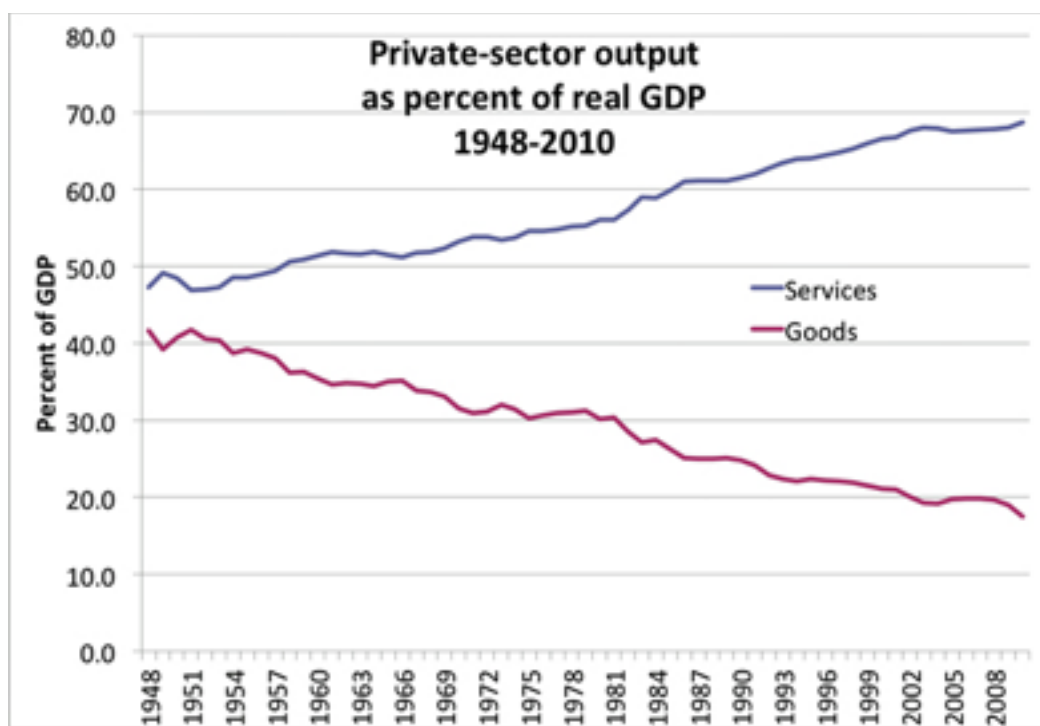
We reviewed the 12 companies that were in operation in the factories along the canal in 1909. It would be outside of the scope of this article to review all 70 of the companies that ever operated in the factories by the canal. Finally, we reviewed some tobacco companies which found ways to use the factories when the manufacturing companies no longer needed the space. The use by those small tobacco companies was not a major factor in Windsor Locks business, but it is an interesting twist to what was happening as the manufacturing companies were cutting back, or going out of business.

What were some of the problems that companies along the canal faced? This topic was not covered in this paper. The Raber and Malone report covers the topic. The problems included:

- The factories were often flooded, because they were in a flood zone of the Connecticut River.
- Fires could not be put out easily because fire trucks couldn't get to the factories.
- People who worked at the mills walked to work or went by bicycle. That limited the distance that workers could live from the factories.
- The factories had to keep re-tooling their manufacturing machinery because of continual changing public tastes.

What “outside forces” caused the growth and the demise of the companies? The following are some ideas from United States history which help in understanding what happened with the canal and the factories along it.

- The companies along the canal built up quickly in the 1830s and 40s, just before the Civil War started. The Civil war was from 1861-1865. Some of the factories provided guns and other supplies for the Army.
- The Second Industrial Revolution in the United States occurred between 1840 and 1870. New technologies became available for mass production and for efficient transportation of goods and people. The factories along the canal were an example of this.
- After 1950, the manufacturing industry of the United States went into a steep decline, as can be seen in the following chart.



"History Lesson: Understanding the Decline in Manufacturing"
MinnPost, Louis D. Johnston, Feb. 22, 2012

This chart shows that American businesses were switching from manufacturing goods to providing services, starting around 1950. Competition from low-cost manufacturing in other countries was one of the key factors. Large multi-national companies were taking over from single owner factories. This was similar to the “Mom and Pop” stores being replaced by the stores of large national chains. All of these factors played roles in the decline of factories across America, including those along the canal in Windsor Locks.

What effects did the demise of the factories along the canal have on Windsor Locks?

1. There was a large loss of jobs, especially for unskilled workers.
2. The town lost a great deal of tax revenue.
3. The downtown Windsor Locks lost its ability to attract outside entrepreneurs, investors and their money.
4. The loss of the business leaders meant there were fewer people in Windsor Locks who could act as role models for the next generation of potential businessmen.
5. The town lost a group of men who were not only good at business but who played key roles in Windsor Locks government. It is important for a town or city to have government leaders who are well versed in business.
6. For more than a century, Main Street had been the business center and the social hub of Windsor Locks. Windsor Locks lost its manufacturing industries at about the same time it lost the retail side of Main Street in the "re-development" project, which did not result in the return of retail businesses as expected. After losing both the factories and its retail outlet center, Windsor Locks became a profoundly different town.
7. Windsor Locks lost many of its major "benefactors," that is, rich and powerful men who made large donations to the town of Windsor Locks over the century in which the factories were strong.
8. The demise of the factories, followed by fires at a few of the abandoned factories, left a string of abandoned structures which have fallen further into blighted condition. This has been going on for more than a half a century.

Towns across the entire United States saw manufacturing businesses rise in the industrial revolution of the 1800s, and die off during the switch from manufacturing to services in the late 1900s. This was not unique to Windsor Locks.

Are there lessons that can be learned from what happened? Here are two possibilities.

- 1) Towns and cities, like individuals, are investors. Probably the most frequently given advice to investors is: Diversify. Don't put all of your investments in one area.
- 2) When the jobs in the mills went away, there were few alternatives for unskilled workers. The best hedge that a person can have against the loss of a job is having skills which are in demand, and which stay in demand. The best options are a college degree or a license in a skilled trade (electrician, plumber, heating and air conditioning).

The lasting impact of the canal being built was that Windsor Locks was born.

Doing research to determine what happened in the past is difficult. Learning how to avoid problems that arose in the past is much more difficult. However it is the most important reason to study history. Possible "lessons learned" need to be hypothesized, and then opened for discussion. Discussion insures that better ideas rise to the

surface, and ideas that do not hold up under scrutiny are dismissed. The ideas written here are merely suggestions for further discussion and debate. The reader should develop his/her own ideas as to what lessons can and should be learned. I hope that the ideas expressed here are useful to you in doing that.

I thank Mickey Danyluck for providing me with copies of the Raber and Malone (1991) report and the Lanati (1976) article. Both are out of print, and difficult to obtain. Both turned out to be extremely valuable in the development of this article. I thank Jerry Dougherty for his website which houses thousands of documents and photographs which are easy to do searches on. I used his website extensively. Finally I thank the reader for reading this article, and I ask him/her to pass it on to others.

Mel Montemerlo
July 25, 2016

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tools for the astronauts to use in the Space Shuttle and on the Space Station. During the next ten years, he managed the Space Artificial Intelligence and Robotics program which introduced the use of artificial intelligence to Mission Control in Houston, and developed the technology for the first Mars rover. Later, he worked in the development of spacecraft for the Astrophysics program. During his 38 year career, he has over 80 technical publications in the areas of pilot training, robotics and artificial Intelligence. Mel now lives in Burke, Va, with his wife, Mary Beth. They have three grown children, and seven grandchildren. His hobbies include woodcarving, music, and writing the history of his hometown, Windsor Locks, Conn.

Mel has a website which contains his articles on the history of Windsor Locks. You can download them directly from:

windsorlockshistory.com

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Mel's articles include:

- The Rise and Fall of the Windsor Locks Canal and the Factories Along It
- The Windsor Locks Macaroni Manufacturing Company
- The Hotel Across from the Railroad Station (1861-1970)
- The 15 "Blocks" of Windsor Locks
- Tony Basile and his Shoe Repair Shop
- The Burnap Block and Central Hall
- Windsor Locks Catastrophes
- Leo Montemerlo's Map of Downtown Windsor Locks Businesses
- D. F. LaRussa and his Appliance Store
- Johnny Cappa and Johnny's Market
- Growing up in Windsor Locks in the 1940s, 50s and 60s
- Earliest Pizza and Grinder Shops of Windsor Locks
- Stella's Charles-Ten Restaurant of Windsor Locks
- Ice Cream Stores of Windsor Locks
- 50 Old Windsor Locks Postcards